We claim:

1. A method of operating air conditioner condenser or heat pump blades, comprising the steps of:

rotating blades within an air condition condenser or a heat pump at up to approximately 850 rpm;

generating airflow from the running blades of up to approximately 1930 cfm; and

requiring power from a 1/8 hp PSC motor of up to approximately 110 Watts while running the blades and generating the airflow.

2. The method of claim 1, wherein the motor includes: an 8-pole PSC motor.

3. The method of claim 1, wherein the blades include fan diameters of approximately 19 inches.

4. The method of claim 1, wherein the blades include fan diameters of approximately 27.6 inches.

5. The method of claim 1, further comprising the step of:

providing twisted fan blades with an air foil.

6. A method of operating air conditioner condenser or heat pump blades, comprising the steps of:

rotating blades within an air conditioner condenser or heat pump up to approximately 1100 rpm;

generating airflow from the running blades up to approximately 2600 cfm; and

requiring power from a motor up to approximately 145 Watts while running the blades and generating the airflow.

7. The method of claim 6, wherein the motor includes: a 6-pole 1/8 hp PSC motor.

8. The method of claim 6, wherein the blades include fan diameters of approximately 19 inches.

9. The method of claim 1, wherein the blades include fan diameters of approximately 27.6 inches.

10. The method of claim 1, further comprising the step of:

providing twisted blades for the air condenser.

11. A method of operating air conditioner condenser or heat pump blades, comprising the steps of:

rotating blades within an air condition condenser at up to approximately 850 rpm;

generating airflow from the running blades of up to approximately 1930 cfm; and

requiring power from a motor of up to approximately 110 Watts while running the blades and generating the airflow.

12. The method of claim 11, wherein the motor includes: a 6-pole 1/8 hp motor operating at 1100 rpm and producing a flow of 2600 cfm at 145 W.

13. The method of claim 11, wherein the blades include fan diameters of approximately 19 inches.

14. The method of claim 11, wherein the blades include fan diameters of approximately 27.6 inches.

15. The method of claim 11, further comprising the step of:

providing twisted blades with an air foil for the air condenser.

16. The method of claim 11, further comprising the step of:

providing a divergent approximately 7° conical diffuser with a conical center body insert which can improve air moving efficiency of the fan configuration by up to 21% at no increase in power.

17. The method of claim 11, further comprising the step of:

providing a strip member along a portion of an interior wall surface of a housing in the condenser, the strip member being adjacent the interior wall surface being swept by the rotating blades; and

improving air moving performance of the rotating blades by safely reducing tip clearance between the rotating blades and the interior wall surface of the housing with the strip member; and

reducing sound level noise emissions from the condenser with the strip member.

18. The method of claim 11, further comprising the step of:

providing two twisted blades on opposite sides of a hub.

19. The method of claim 11, further comprising the step of:

providing three twisted blades equally spaced apart from one another about a hub.

20. The method of claim 11, further comprising the step of:

providing four twisted blades equally spaced apart from one another about a hub.

21. The method of claim 11, further comprising the step of:

providing five twisted blades equally spaced apart from one another about a hub.

22. The method of claim 11, further comprising the step of:

providing twisted blades asymmetrically spaced apart from one another about a hub.

23. The method of claim 11, further comprising the step of:

providing five twisted blades asymmetrically spaced apart from one another about a hub.

24. An air conditioner condenser or heat pump fan assembly, comprising:

a hub connected to an air conditioner or a heat pump;

a first twisted blade attached to the hub;

a second twisted blade attached to the hub; and

a motor generating substantial CFM from a limited RPM rotation of the blades while using limited power watts of the motor.

25. The assembly of claim 24, wherein approximately 1930 CFM of air flow is generated using approximately 110 Watts of power while running the blades at approximately 850 RPM.

26. The assembly of claim 24, wherein the motor includes: an 8-pole motor.

27. The assembly of claim 24, wherein approximately 2610 CFM of air flow is generated using approximately 145 Watts of power while running the blades at approximately 1100 RPM.

28. The assembly of claim 24, wherein the motor includes: a 6-pole motor.

29. The assembly of claim 24, wherein approximately 1900 to approximately 2600 CFM of air flow is generated using approximately 110 to approximately 145 Watts of power while running the blades at approximately 1100 RPM.

30. The assembly of claim 24, further comprising: a third twisted blade.

31. The assembly of claim 30, further comprising: a fourth twisted blade.

32. The assembly of claim 31, further comprising: a fifth twisted blade.

33. The assembly of claim 30, further comprising:

means for orienting the blades into an asymmetrical configuration to reduce dB levels of the assembly.

34. The assembly of claim 31, further comprising:

means for orienting the blades into an asymmetrical configuration to reduce dB levels of the assembly.

35. The assembly of claim 32, further comprising:

means for orienting the blades into an asymmetrical configuration to reduce dB levels of the assembly.

36. The assembly of claim 24, further comprising:

a conical diffuser housing for increasing air flow efficiency of the blades.

37. The assembly of claim 24, further comprising:

an overall diameter across the blades being approximately 19 inches.

38. The assembly of claim 24, further comprising:

an overall diameter across the blades being approximately 27.6 inches.

39. The assembly of claim 24, further comprising:

a first control for rotating the blades a first speed when a first temperature level is detected adjacent to the air conditioner or the heat pump; and

a second control for increasing the rotating of the blades to a second speed higher than the first speed when a second temperature level is detected adjacent to the air conditioner or the heat pump that is higher than the first temperature level.

40. The assembly of claim 39, wherein the first control and the second control includes: a ECM motor with selectable speeds.

41. An improved air conditioner condenser or heat pump fan assembly with rotating blades attached to a hub mounted within a housing having reduced sound noise emissions, the improvement comprising:

a porous member attached to at least one of the rotating blades and the housing. for reducing sound noise emissions from the housing and for increasing air flow from the rotating blades.

42. The improved air conditioner condenser or heat pump fan assembly of claim 41, further comprising:

a foam strip mounted about a portion of an interior wall of the housing adjacent to the interior wall being swept by the rotating blades, the foam strip reducing spacing between the tip of the rotating blades and the interior wall of the housing.

43. The improved air conditioner condenser or heat pump fan assembly of claim 42, wherein the porous foam strip includes dimensions of approximately 1&1/2 inches wide by approximately 3/16 inches thick, and having a length substantially running about the interior wall of the housing being swept by the rotating blades.

44. The improved air conditioner condenser or heat pump fan assembly of claim 41, further comprising:

a porous foam strip along a trailing edge of at least one of the rotating blades.

45. The improved air conditioner condenser or heat pump fan assembly of claim 41, further comprising:

a porous foam strip along a tip edge of at least one of the rotating blades.

46. An improved air conditioner condenser or heat pump fan assembly with rotating blades attached to a hub mounted within a housing having reduced sound noise emissions, the improvement comprising:

interior walls of the housing form a diffuser having an outwardly expanding convex curved, conical shape for reducing undesirable sound noise emissions from the housing.

47. The improved air conditioner condenser or heat pump fan assembly of claim 46, further comprising:

a single conical body member attached to an upper portion of the hub, wherein both the diffuser walls and the single conical body member reduce undesirable sound emissions that emanate from the rotating blades within the housing.

48. The improved air conditioner condenser or heat pump fan assembly of claim 47, further comprising:

a foam strip mounted to at least one of the diffuser walls or the rotating blades.

49. An improved air conditioner condenser or heat pump fan assembly with rotating blades attached to a hub mounted within a housing having reduced sound noise emissions, the improvement comprising:

a first control for rotating the blades at a first speed when a first temperature level is detected adjacent to the air conditioner condenser or the heat pump fan assembly; and

a second control for increasing the rotating of the blades to a second speed higher than the first speed when a second temperature level is detected adjacent to the air conditioner condenser or the heat pump fan assembly that is higher than the first temperature level.

50. A method of reducing sound noise emissions from rotating blades of an outdoor air conditioner condenser/heat pump assembly, comprising the steps of:

rotating the blades of the outdoor assembly at a first speed when a first temperature level is detected adjacent to the assembly; and

increasing the rotating first speed of the blades to a second speed that is greater than the first speed when a second temperature level that is greater than the first temperature level is detected adjacent to the assembly.

51. The method of claim 50, further comprising the steps of:

detecting the first temperature level and the second temperature level at an outdoor air source to the outside assembly.

52. The method of claim 50, further comprising the steps of:

detecting the first temperature level during a nighttime state; and

detecting the second temperature level during a daytime state.

53. A method for reducing sound noise emissions in an air conditioner condenser/heat pump fan assembly having rotating blades attached to a hub mounted within a housing, comprising the steps of:

providing interior walls of the housing above the rotating blades with a diffuser having an outwardly expanding convex curved, conical shape; and

reducing undesirable sound noise emissions the rotating blades inside of the housing with the diffuser.

54. The method of claim 53, further comprising the step of

attaching a single conical body member to an upper portion of the hub; and

reducing undesirable sound emissions that emanate from the rotating blades within the housing with both the diffuser and the single conical body member reduce

55. A method of reducing undesirable sound noise emissions and increasing airflow in an air conditioner condenser/heat pump fan assembly having rotating blades attached to a hub mounted within a housing, comprising the steps of:

providing a porous surface to an area adjacent to the rotating blades within the housing; and

simultaneously reducing both the sound noise emissions from the rotating blades and the air flow from the rotating blades by the porous surface being adjacent to the rotating blades.

56. The method of claim 55, wherein the providing step includes the step of:

mounting a porous strip about a portion of an interior wall of the housing being swept by the rotating blades, the foam strip reducing spacing between the tip of the rotating blades and the interior wall of the housing.

57. The method of claim 55, wherein the providing step includes the step of:

providing a porous surface along a trailing edge of at least one of the rotating blades.

58. The method of claim 55, wherein the providing step includes the step of:

providing a porous surface along a tip edge of at least one of the rotating blades.

59. The method of claim 55, further comprising the step of:

reducing fan blade tip clearance of the rotating blades and interior walls of the housing with the porous surface; and

breaking up fan tip vortex shedding from the rotating blades with the porous surface.